



IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

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Case: **7-9**

Serial No.: **10/069371** Group Art Unit: **2616**

Filing Date: **February 19, 2002**

Examiner: **Wilson, Robert W.**

Title: **Parallel Core Networks For GSM/UMTS**

COMMISSIONER FOR PATENTS
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APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. 41.37

Sir:

This is an Appeal Brief in response to the Final Office Action mailed March 23, pertaining to Claims 1, 3, 4 and 7 and the Advisory Action mailed July 2, 2009. A Notice of Appeal from this Final Rejection was timely filed on July 15, 2009. Appellants submit herewith their Brief on Appeal as required by 37 C.F.R. §41.37 along with the appropriate governmental fees as required by 37 C.F.R. §41.20(b)(2).

I. REAL PARTY IN INTEREST:

The real party in interest is Alcatel-Lucent USA Inc. (formerly named Lucent Technologies Inc.).

II. RELATED APPEALS AND INTERFERENCES

There are no pending Appeals related to this application.

III. STATUS OF CLAIMS

Claims 1, 3, 4 and 7 are pending in the application.

Claims 1 and 4 have been rejected under 35 USC103(a) over Widegren in view of Hart.

Claim 3 has been rejected under 35 USC103(a) over Widegren in view of Hart further in view of Architectural Aspects for the Evolution of Mobile Communications Towards UMTS by Berruto.

Claim 7 has been rejected under 35 USC103(a) over Widegren in view of Hart further in view of Boudreaux.

IV. STATUS OF AMENDMENTS

An Amendment Under C.F.R. §1.111 was filed February 15, 2008, and entered by the Examiner. The Claims Appendix reflects claims 1, 3, 4 and 7 as listed in the February 15, 2008 submittal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

General discussion of the subject matter

As described on page 1 lines 19 to page 2 line 15, a mobile terminal can connect via a radio access network to multiple core networks. In a particular embodiment a mobile terminal can be switched between core networks of the same type, see specification page 11 line 9 to page 12 line 14 and Figure 5. In that example embodiment the two core networks 214, 514 are 2G core networks; and the switching capability of the BSS 500 is used to spread the load between them.

Explanation of the subject matter set forth in each independent claim

Independent Claim 1

Claim 1 recites "A packet switched network architecture comprising a location area connected by a radio access network to at least two core networks having the same functionality". As shown in Figure 5 and described on page 11 line 9 onwards of the

specification, a packet switched architecture comprising a location area connected to the core networks by a radio access network is described.

Claim 1 further recites “wherein the radio access network switches packet transmissions from each terminal in the location area to one of the at least two core networks”. A relevant portion of the specification describing an embodiment having this feature is page 11 lines 14 to 24 and Figure 5.

Claim 1 further recites “wherein the radio access network switches packet transmissions from each terminal to one of the at least two core networks in dependence on the capacity of the respective core networks”. This relates in particular to Figure 5 and page 11 line 9 to page 12 line 14 of the specification, in particular page 11 lines 25 to 26.

Independent Claim 4

Claim 4 recites “A method of allocating resources in a packet switched mobile network, comprising: allocating at least two core networks having the same functionality to a location area;”. As shown in Figure 5 and disclosed on page 11 lines 14 to 19 and page 12 lines 7 to 10, the location area LA1 has two such core networks 214, 514 allocated.

Claim 4 further recites “associating each mobile user in the location area with one of the core networks;”. This relates, for example to use of the location area identifier to distinguish between the core networks, see page 12 lines 7 to 9.

Claim 4 further recites “and switching, by the radio access network, packet transmissions from a mobile user in the location area to one of the core networks in dependence on the capacity of the networks.”. This relates, for example to the BSS 500 switching packet transmissions to spread the load between the two core networks 214, 514, see page 11 lines 25 to 26.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1 and 4 are unpatentable under 35 USC 103(a) over Widegren in view of Hart.

Whether claim 3 is unpatentable under 35 USC 103(a) over Widegren in view of Hart further in view of “Architectural Aspects for the Evolution of Mobile Communications Towards UMTS” by Berruto.

Whether claim 7 is unpatentable under 35 USC 103(a) over Widegren in view of Hart further in view of Boudreaux.

VII. ARGUMENT

A. Rejection under 35 USC 103(a) of claims 1 and 4

1. Widegren’s “core network” is not the core network referred to in the claims.

On a preliminary point, it is respectfully submitted that the Examiner is misapplying Widegren, partly because Widegren misuses the term “core network” to refer to the public distribution network, i.e. the PSTN or the Internet. Actually, the proper use of the term “core network” is limited to the level in the network hierarchy above the access network and below the distribution network. As such, a core network will typically provide the highest level of aggregation in a service provider network, as well as, e.g., authentication, call control or switching, charging, service invocation, and gateways.

Thus in the context of the present application, the “core network” most likely belongs to a particular GSM or UMTS operator, and it aggregates calls from that particular operator’s own customers for subsequent distribution over the public network. Therefore, when the Examiner argues that Widegren can switch calls between different “core networks”, what we understand he really should be saying for fairest comparison with the present application is, “the Widegren core network can select between directing calls onto various public distribution networks such as the Internet and the PSTN.” Putting it this way, it is clear that it is not the same concept, and that Widegren is therefore inapposite.

2. The difference between the respective meanings of “core network” is material to the patentability of the claims because between public distribution networks are not analogous to core networks proper.

The claimed invention relates inter alia to core networks that are allocable to a location area of a wireless network, to the switching of packet transmissions by a radio access network (RAN) from terminals in the location area to the core networks, and to having the switching be dependent on the core network capacities.

Public distribution networks—i.e., Widegren’s misnamed “core networks”—are not allocable to a location area of a wireless network. Because public distribution networks operate at a higher level of aggregation, they certainly do not receive packet transmissions switched by a RAN from terminals in a location area. Much less, then, does the mere fact that several public distribution networks may be available provide any suggestion or motivation to control packet transmissions of the kind recited in the claims based on core network capacities.

In this regard, there is no analogy between the functions and technical challenges of public distribution networks on the one hand, and those of core networks (as properly defined) on the other. Therefore, there is no teaching or suggestion in Widegren, whether alone or in combination with other references, that raises any prima facie case of obviousness. Widegren is therefore inapposite.

3. Widegren teaches the use of “core networks” having different respective functionalities, contrary to the claimed invention.

Widegren states at column 5 lines 31-37 that “A representative, connection-oriented, external core network, shown as a cloud 12, may be for example the Public Switched Telephone Network (PSTN) and/or the Integrated Services Digital Network (ISDN). A representative, connectionless-oriented external core network, shown as a cloud 14, may be for example the the Internet.”.

Thus, if arguendo credence is given to the Examiner’s position that Widegren’s PSTN and Internet are “core networks”, it follows that Widegren teaches away from the claim limitation of “two core networks having the same functionality”, since circuit-switching (as in the PSTN) and packet-switching (as in the Internet) are distinctly different functionalities.

4. The Hart reference is inapposite as addressing a different problem, which moreover is in a non-analogous technical field.

The Hart reference concerns STP, which is a protocol used only for the computation of routes in local area networks, primarily Ethernet LANs. The “load

sharing” that is involved means distributing traffic over more than one path from the source to the destination. The different “networks” referred to in Hart are just different portions of the same topological mesh, and their only significance is that they represent different ways of routing the same traffic.

Because Hart belongs solely to the context of routing algorithms for application to local area networks, it has no bearing on the problems of call management encountered by operators of wireless access networks having overlapping service areas, said problems being unrelated to routing.

Therefore, not only Widegren, but also Hart, is entirely inapposite. Moreover, there is no motivation to combine the two references, as Widegren fails to raise any problem that would be solved by “load sharing” according to Hart. Indeed, as Widegren is not concerned with routing protocols, it is difficult to see how the teachings of the two references could be combined, even if there were some motivation to do so.

5. The independent claims are non-obvious over the cited references.

It follows that claims 1 and 4 meet the standard of 35USC103(a) over the cited combination of Widegren and Hart.

B. Rejection under 35 USC 103(a) of claim 3

Claim 3 is patentable not least on the basis that it depends on an allowable amended claim 1.

C. Rejection under 35 USC 103(a) of claim 7

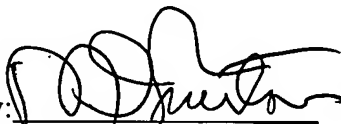
Claim 7 is allowable not least on the basis that it is dependent on an allowable independent claim 1.

VIII. CONCLUSION

Appellants respectfully request the Board to reverse the Examiner's rejection of claims 1, 3, 4 and 7 and allow each of these claims.

The Commissioner is authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachments: Appendix IX. Claims
Appendix X. Evidence
Appendix XI. Related Proceedings

IX. CLAIMS APPENDIX

1. **(Previously Presented)** A packet switched network architecture comprising a location area connected by a radio access network to at least two core networks having the same functionality, wherein the radio access network switches packet transmissions from each terminal in the location area to one of the at least two core networks,

wherein the radio access network switches packet transmissions from each terminal to one of the at least two core networks in dependence on the capacity of the respective core networks.

2. **(Canceled)**

3. **(Previously Presented)** The packet switched network of claim 1 in which each core network includes a mobile switching center (MSC) comprising a visitor location register (VLR), the VLR determining capacity of the respective core network.

4. **(Previously Presented)** A method of allocating resources in a packet switched mobile network, comprising: allocating at least two core networks having the same functionality to a location area; associating each mobile user in the location area with one of the core networks ; and switching, by the radio access network, packet transmissions from a mobile user in the location area to one of the core networks in dependence on the capacity of the networks.

5. **(Canceled)**

6. **(Canceled)**

7. **(Previously Presented)** A packet switched network architecture according to claim 1, in which said at least two core networks are second generation networks.

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X. EVIDENCE APPENDIX

NONE

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XI. RELATED PROCEEDINGS APPENDIX

NONE